

AMENDMENTS TO THE CLAIMS

In the Claims

The following listing of claims replaces all prior versions and listings of claims in the application.

Listing of Claims

1. (Currently Amended) An anode module ~~[[(1)]]~~ for a liquid metal anode x-ray source ~~which has an electron entry window~~ ~~[[(3)]]~~ ~~in a region of focus, characterized in that~~ the anode module comprising:

an electron entry window on the anode module in a region of focus; and

an x-ray beam exit window ~~(4) lies on a portion of the anode module~~ opposite the electron entry window ~~[[(3)]]~~.

wherein ~~and the~~ an exit angle ~~(Θ) of the x-ray beams~~ ~~(7)~~ between an electron beam ~~[[(6)]]~~ entering through that enters the electron entry window ~~[[(3)]]~~ along ~~[[the]]~~ a direction of incidence ~~[[(5)]]~~ and ~~[[the]]~~ an x-ray beam ~~[[s (7)]]~~ that exits ~~exiting through the x-ray beam exit window~~ ~~[[(4)]]~~ is between 5° and 50°.

2. (Currently Amended) An anode module ~~[[(1)]]~~ according to claim 1, ~~characterized in that~~ wherein the electron ~~[[exit]]~~ entry window ~~[[(3)]]~~ is ~~[[a]]~~ one of a metal foil, a diamond film, a ceramic material or a monocrystal ~~in particular of tungsten, from 5 μ m to 30 μ m thick, or a diamond film, a ceramic material or a monocrystal.~~

3. (Currently Amended) An anode module ~~[[(1)]]~~ according to claim 1, ~~characterized in that~~ wherein the x-ray beam exit window ~~[[(4)]]~~ is a steel sheet from 100 μ m to 400 μ m thick.

4. (Currently Amended) An anode module ~~[[(1)]]~~ according to claim 1, ~~characterized in that~~ wherein in the region of focus ~~[[(2) it]]~~ the anode module is from 100 μ m to 350 μ m thick in ~~[[the]]~~ a direction of the incident electron beam ~~[[(6)]]~~.

5. (Currently Amended) An anode module [(1)] according to claim 1, ~~characterized in that~~ wherein in the region of focus [(2) it] the anode module has a constricting channel [(8)] in [(the)] a direction of the incident electron beam [(6)], and

wherein outside the region of focus [(2)], the anode module is from 5 mm to 10 mm thick.

6. (Currently Amended) An anode module [(1)] according to claim 1, ~~characterized in that~~ wherein the electron entry window [(3)] is convexly curved perpendicular to [(the)] a direction of flow [(9)] of the liquid metal [(10)].

7. (Currently Amended) An anode module [(1)] according to claim 1, ~~characterized in that~~ wherein the x-ray beam exit window [(4)] is concavely curved perpendicular to [(the)] a direction of flow [(9)] of the liquid metal [(10)].

8. (Currently Amended) An anode module [(1)] according to claim 1, ~~characterized in that~~ wherein the focus length is 2 mm to 8 mm.

9. (Currently Amended) An anode module [(1)] according to claim 1, ~~characterized in that~~ wherein the effective focus size is 1 mm x 1.3 mm.

10. (Currently Amended) An anode module [(1)] according claim 1, ~~characterized in that~~ wherein an axis of the region of focus (2) ~~runs parallel to the Y-Z plane which stands~~ perpendicular to [(the)] a direction of flow [(9)] of the liquid metal [(10)].

11. (Currently Amended) An anode module [(1)] according to claim 1, ~~characterized in that~~ wherein [(the)] an angle of incidence (α) ~~between the direction of incidence (5) of electron beam (6) and the Z-axis~~ is between 5° and 65°.

12. (Currently Amended) An anode module [(1)] according to claim 1, ~~characterized in that~~ wherein [(the)] an anode angle (β) ~~between the exit direction (12) of the x-ray beam (7) and the Y-axis~~ is between 10° and 50°.

13. (Currently Amended) An anode module ~~[[(1)]]~~ according to claim 1, ~~characterized in that~~ wherein the angle of incidence (α), the anode angle (β) and the exit angle (Θ) all lie in ~~the Y-Z~~ a single plane.

14. – 15. (Canceled)

16. (New) An anode module according to claim 2, wherein the metal foil comprises tungsten.

17. (New) An anode module for a liquid metal anode x-ray source, the anode module comprising:

an electron entry window formed on the anode module in a region of focus,
wherein the electron entry window is convexly curved perpendicular to a direction of flow of the liquid metal.

18. (New) An anode module according to claim 17, further comprising:

an x-ray beam exit window on a portion of the anode module opposite the electron entry window,

wherein an exit angle (Θ) between an electron beam that enters the electron entry window along a direction of incidence and an x-ray beam that exits the x-ray beam exit window is between 5° and 50°